HARNESSING THE POTENCY OF ARTIFICIAL INTELLIGENCE AND BIG DATA EFFECTIVELY: A PANACEA FOR HUMAN RIGHT PROTECTION AND SOUND LEGAL SYSTEM FOR A SAFE NIGERIA.

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ABSTRACT

Harnessing the combined potential of Artificial Intelligence (AI) and big data offers a transformative pathway for strengthening human rights protection and fostering a sound legal system in Nigeria. By leveraging advanced analytics, predictive modelling, and real-time data processing, AI-powered big data systems can enhance transparency, improve case management, detect rights violations, and facilitate timely interventions in both civil and criminal justice processes. These technologies can support evidence-based policymaking, identify systemic biases, and ensure equitable access to justice, thereby addressing long-standing challenges in governance, law enforcement, and judiciary efficiency. When implemented within robust ethical, legal, and data governance frameworks, the synergy between AI and big data can serve as a panacea for safeguarding rights, promoting accountability, and building a safer, more just Nigeria. The study concluded that with continued innovation in explainable AI, ethical governance, and scalable infrastructure, AI-aided big data will remain an indispensable tool in shaping future predictive analytics and driving impactful, informed outcomes. One of the recommendations is that it is advisable to adopt AI in developing comprehensive regulations that define ethical use, data privacy standards, and accountability mechanisms for AI-driven legal and human rights applications.

KEYWORDS: Artificial Intelligence, Big Data, Human Right, Protection, Sound, Legal System, Nigeria

INTRODUCTION

The integration of Artificial Intelligence (AI) with big data technology has redefined predictive analytics, enabling accurate forecasting of potential case outcomes in various sectors, such as law, healthcare, and finance. AI algorithms, particularly machine learning and deep learning models, can process massive and complex datasets to detect patterns, correlations, and trends that would be impossible to discern through manual analysis. In the legal field, AI-driven analytics can analyze thousands of past rulings to assess the likelihood of specific verdicts, thus supporting legal practitioners in strategy formulation (Ashley, 2020; Bench-Capon & Atkinson, 2020). Similarly, in healthcare, AI-powered predictive models can assess patient histories, diagnostic data, and treatment responses to forecast health outcomes, facilitating early interventions (Shah et al., 2021).

The growing availability of digital records, coupled with advancements in data storage and processing, has amplified the potential of AI-aided big data systems. These technologies excel in handling structured and unstructured data, from numerical records to text-based documents, and apply natural language processing (NLP) and computer vision to transform raw information into actionable predictions (Gokhale, 2020; Zhou, 2021).. In financial and insurance industries, predictive analytics powered by AI can evaluate claim legitimacy, detect fraudulent patterns, and estimate litigation risks with remarkable accuracy (Bărcanescu, 2021). Such capabilities not only improve decision-making efficiency but also enhance the precision and reliability of outcome forecasts, giving stakeholders a competitive edge.

However, the adoption of AI-aided big data technology for predictive purposes raises critical concerns about transparency, fairness, and accountability. Black-box AI models may deliver high accuracy but lack interpretability, leading to ethical and legal challenges, especially in sensitive decision-making contexts (Rudin, 2019; Guidotti, 2021). Consequently, there is an increasing emphasis on Explainable AI (XAI) to make predictive models more transparent and trustworthy. Moreover, robust data governance frameworks are essential to safeguard privacy, ensure regulatory compliance, and mitigate bias in predictions (Verma & Varma, 2021). Addressing these challenges will be key to unlocking the full potential of AI-aided big data in predicting case outcomes across sectors.

CONCEPT OF AI

According to Akpan & Clark (2024), in the modern world, artificial intelligence has become incredibly popular. Artificial intelligence (AI) is the study of how the human brain makes decisions, learns new things, and thinks through difficulties. The goal of artificial intelligence is to enhance computer abilities related to human understanding, including language intelligence, learning, reasoning, and problem-solving. Artificial intelligence is gaining more attraction as this application focuses on delivering information to the users. People think of it as a difficult job for libraries, but the name implies that it is artificial, not human (Udo-Okon & Ekong, 2022). As mention by Bassey & Owushi (2023), Artificial Intelligence can be understood as the collection of technologies that enable machines to sense, comprehend, act, and perform several functions matching those of humans. As noted by Kingsley& James (2025), AI enables machines to perform tasks that require human intelligence, such as speech recognition, decision-making, and data analysis Major components of the Artificial Intelligence bucket are machine learning, big data, natural

language processing, decision logic, data visualization, and data analytics. Further, explain by Habeeb, Adesemowo & Babatunde (2025) Data mining and big data analytics are two of the most common and useful AI techniques.

CONCEPT OF BIG DATA

According to Kingsley & James (2025), big data refers to vast amounts of structured and unstructured data that require advanced analytical tools to process. Businesses and organizations use big data analytics to make informed decisions, predict trends, and personalize user experiences. It is widely used in finance, marketing, healthcare, and governance. Many organizations help create a personalized user experience library using big data. As noted by Ekong & Theresa (2022), the purpose of this technology is to promote library services by providing the user's information about their choices and providing resources and services under this technology.

As noted by Chen (2024), 'big data' refers to extremely large and complex data sets that cannot be easily managed or analyzed with traditional data processing tools, particularly spreadsheets. Big data includes structured data, like an inventory database or list of financial transactions; unstructured data, such as social posts or videos; and mixed data sets, like those used to train large language models for AI. Data mining and big data analytics are two of the most common and useful AI techniques. These data sets might include anything from the works of Shakespeare to a company's budget spreadsheets for the last 10 years.

As mention by Badman & kosinski (2024), big data refers to massive, complex data sets that traditional data management systems cannot handle. When properly collected, managed and analyzed, big data can help organizations discover new insights and make better business decisions. Big data, on the other hand, encompasses massive datasets in various formats, including structured, semi-structured and unstructured data.

"Big data" encompasses the volume of information, the speed at which it is created and collected, and the scope of the data to provide the raw material used in data mining. Big data is structured or unstructured. Structured data is commonly numeric information easily accessed from databases and spreadsheets. Unstructured data can be more qualitative and unorganized. According to IBM, examples of unstructured data may include "text, mobile activity, social media posts, and Internet of Things (IoT) sensor data." Semi-structured data has characteristics of both structured and unstructured data (Segal, 2025).

CONCEPT OF HUMAN RIGHT

According to Weston (2025), human rights belong to an individual or group of individuals simply for being human, or as a consequence of inherent human vulnerability, or because they are requisite to the possibility of a just society. Regardless of its theoretical basis, human rights encompass a broad range of principles or capacities deemed to uphold human agency or safeguard human interests and are proclaimed to be universal in nature, in a sense equally claimed for all people, past, present, and future.

As mentioned by Hindu (2024), human rights are universal, inalienable, indivisible, interdependent, and interrelated fundamental entitlements inherent to all human beings, regardless of race, gender, nationality, ethnicity, language, religion, or any other status. These

rights are incorporated in various international instruments, such as the Universal Declaration of Human Rights (UDHR) and subsequent covenants, conventions, and treaties.

CONCEPT OF LEGAL SYSTEM

According to Olamide (2019), a legal system may be described as the interaction of laws within a legal order. The Nigerian legal system refers to the totality of laws in Nigeria and the machinery through which these laws are enforced. It has been said that all the laws in a legal system are based on a fundamental norm from which they get their validity. This is referred to as the grundnorm. The grundnorm is the Fon et origo, the source of every other law and authority in the legal system. As mentioned by up counsel (2020), a legal system is the framework of rules, procedures, and institutions that a community uses to interpret and enforce their laws. A legal system is binding on all legal disputes within its jurisdiction. The legal system of a country is a set of rules or laws, procedures by which these rules or laws are enforced and legal institutions where these rules or laws are interpreted. The legal system is essential to the success of international business. Rules and laws of a country define the rights and obligations of parties involved in business transactions. These rules and laws of a country also determine the way business transactions are executed, and they regulate business practice. As noted by Hulatt & Freitas (2025), the legal system refers to the framework of rules and institutions that govern a society. It encompasses the mechanisms for creating, interpreting, and enforcing laws. Understanding the legal system is essential not just for aspiring lawyers but for anyone who interacts with it in their daily lives. The legal system is the foundation of any society. It shapes how laws are created, interpreted, and enforced, ensuring justice, order, and the protection of individual rights. Without a functioning legal system, societies would lack the structure needed to resolve disputes, govern behaviour, and uphold fairness. The legal system is not just about laws. It is an interconnected structure that ensures justice is served (Kelly, 2018).

TYPES OF HUMAN RIGHTS

Human rights are the fundamental freedoms and entitlements that every individual possesses simply by virtue of being human. They are universal, inalienable, and interdependent and are generally classified into categories that reflect their nature, scope, and the type of protection they offer. Three Generations (or "Three Types") of Rights

- **First-generation rights:** Civil and Political Rights ("negative" rights) - freedoms from state interference, such as freedom of speech, right to a fair trial, and voting rights.
- **Second-generation rights:** Economic, Social, and Cultural Rights ("positive" rights) - rights that require state action, including the right to health, education, work, and an adequate standard of living (Belakud, 2024).
- **Third-generation rights:** Collective or Solidarity Rights—group-oriented rights addressing global and communal issues, such as the rights to development, self-determination, environment, and resources.

Core Categories by Function and Norm

- **Civil & Political Rights (negative/first-generation):** Protect individual autonomy and participation in civic life. Examples: life, freedom from torture, speech, assembly, fair trial.
- **Economic, Social & Cultural Rights (positive/second-generation):** Enable access to essentials and enable dignity—healthcare, education, social security, cultural participation.
- **Social (or Subsistence) Rights**—some scholars distinguish social rights (survival-based, e.g., food, shelter, health) from economic ones.
- **Legal/Procedural Rights, Equality Rights, Property Rights,** etc., often appear in national frameworks (e.g., Nigerian categorization).

TYPES OF LEGAL SYSTEM

A legal system is the framework of rules, institutions, and practices through which justice is administered and social order is maintained in a society. Different countries adopt varying legal systems based on history, culture, and governance. They are:

- **Common Law System**

The common law system is a legal tradition that relies heavily on judicial decisions and the doctrine of precedent, meaning that earlier court rulings form binding authority for future similar cases. This system, which originated in England, emphasises the role of judges in interpreting and developing the law through case decisions rather than solely relying on codified statutes. Countries like the United Kingdom, the United States, Canada, and Nigeria (in some jurisdictions) follow this model. Its flexibility allows the law to evolve organically in response to societal changes.

- **Civil Law System**

The civil law system is based on comprehensive legal codes that provide a structured framework for all areas of law, leaving judges with the role of applying the written statutes rather than creating law through precedent. Originating in continental Europe, this system dominates in countries such as France, Germany, Japan, and Brazil. The civil law approach is characterized by its logical organization and predictability, as codified laws are designed to cover most legal situations.

- **Religious (Theocratic) Law System**

Religious law systems derive their authority from sacred texts and religious doctrines, making moral and spiritual principles central to legal processes. The most well-known example is Islamic law (Sharia), which governs both personal and public conduct in countries like Saudi Arabia, Iran, and parts of the United Arab Emirates. Other examples include Jewish Halakha and Canon Law in the Catholic tradition. These systems often regulate personal status laws such as marriage, inheritance, and moral conduct, and in some jurisdictions, they coexist with secular legal frameworks.

- **Customary Law System**

Customary law systems are rooted in the traditions, customs, and cultural practices of a community, often transmitted orally and enforced by local elders or community leaders. Such laws are prevalent in many indigenous societies across Africa, Asia, and the Pacific Islands. They often address issues such as land rights, marriage, conflict resolution, and resource management, reflecting the values and norms of the community.

- **Socialist Law System**

Socialist law systems emerged from Marxist-Leninist ideology, emphasizing state ownership of property, centralized economic planning, and the subordination of legal institutions to political objectives. Historically associated with the Soviet Union and Maoist China, modern socialist legal systems—such as those in Cuba and North Korea—retain elements of state control but may incorporate aspects of market regulation.

- **Mixed or Hybrid Legal Systems**

Mixed or hybrid legal systems combine elements from two or more legal traditions, often as a result of colonial history, globalisation, or multicultural governance. For example, South Africa integrates common law, civil law, and customary law, while Nigeria blends common law with Islamic and customary systems depending on the region. Mixed systems are now the most common globally, as they allow for legal pluralism that accommodates diverse cultural, political, and historical contexts.

EFFECT OF ARTIFICIAL INTELLIGENCE ON HUMAN RIGHT PROTECTION

Artificial Intelligence (AI) has emerged as a transformative force in the protection and promotion of human rights globally. One of its most promising applications lies in the area of human rights monitoring and access to justice. AI-powered tools can analyses vast amounts of data—including satellite imagery, social media posts, and news reports—to identify signs of potential human rights violations in real time. These technologies have enabled organizations such as Amnesty International and the United Nations to document evidence of war crimes, track forced displacements, and observe the destruction of civilian infrastructure during conflicts. In addition, AI is being integrated into platforms that provide legal aid to underserved communities. Services like DoNotPay and Legal Robot use AI chatbots and document analysis tools to help individuals challenge unfair legal decisions or access asylum procedures, thus expanding access to justice and empowering marginalized populations with legal knowledge and support (Susskind, 2019).

In terms of socioeconomic rights, AI contributes positively by improving accessibility for people with disabilities, linguistic minorities, and others who have historically been excluded from mainstream services. AI-driven technologies such as voice recognition, screen readers, and real-time translation tools help remove barriers to education, employment, and public participation. For example, AI-generated captions assist the hearing impaired in accessing video content, while adaptive learning systems personalize educational materials to accommodate different learning needs. These applications are aligned with the right to education, the right to participate in cultural life, and the right to work, as outlined in international human rights frameworks. Organizations like UNESCO have emphasized the importance of ethically designed AI systems that prioritize inclusion and diversity, helping to ensure that AI-driven innovations serve as tools for empowerment rather than exclusion

(UNESCO, 2021). Notwithstanding these advantages, the application of AI poses significant risks to human rights, especially in relation to privacy and freedom of speech.AI systems frequently gather personal information without informed consent, particularly when they are employed for content filtering and surveillance. Both governments and businesses have embraced facial recognition technology extensively, allowing for widespread surveillance that violates people's right to privacy and anonymity. AI techniques are employed in authoritarian regimes to profile marginalized groups, restrict opposing voices, and track political dissent. Automated content moderation systems have the power to eliminate acceptable political or cultural discourse even in democracies, frequently with opaque appeal procedures. These practices violate the rights to freedom of expression, access to information, and participation in public discourse, contributing to a shrinking space for civil society and democratic engagement (Article 19, 2021; Zuboff, 2019).

The possibility that AI systems would reinforce and worsen current kinds of discrimination is another important concern.AI systems may generate discriminatory results in fields like recruiting, law enforcement, lending, and healthcare since they are frequently trained on historical data that reflects societal prejudices like racism, misogyny, or classism. For example, it has been demonstrated that predictive policing algorithms disproportionately target communities of colour and that biased training datasets may cause AI-based hiring tools to favour male candidates. The rights to equality and non-discrimination are violated by certain types of algorithmic bias. The lack of transparency in AI decision-making exacerbates this problem. Since many AI systems function as "black boxes", it might be challenging for people to comprehend, question, or seek recourse for judgments that are detrimental. This undermines the right to due process and effective remedy, both of which are fundamental principles of international human rights law (Eubanks, 2018; AlgorithmWatch, 2020). Finally, there are new risks to human security and dignity from the employment of AI in military and labour automation applications.AI is causing broad job displacement in the labour sector by automating tasks across industries, particularly for low-skilled individuals. The right to work is at risk due to this tendency, especially in developing nations with inadequate or non-existent social safety nets. Furthermore, issues of accountability, proportionality, and the protection of human life in armed conflict are brought up by the militarization of AI through the creation of lethal autonomous weapons systems (LAWS).These systems might decide on their own to employ deadly force, eluding human control and thus breaking international humanitarian law. As AI becomes more integrated into both economic and military infrastructure, global efforts are urgently needed to regulate its use, ensuring it remains consistent with human rights principles and international norms (ICRC, 2020; ILO, 2021).

THE EFFECT OF BIG DATA ON HUMAN RIGHTS PROTECTION

Big Data's ascent has significantly changed the worldwide environment in terms of legal system, public health, security, government, and business. Big Data poses serious risks as well as exciting prospects in the field of human rights. Fundamentally, big data is the gathering and examination of enormous volumes of data produced by sensors, digital devices, social media, and transactional records. These days, governments and organizations utilize this data to forecast trends, find patterns, and develop policies. Such capabilities raise issues about privacy, discrimination, and the exploitation of personal information, even while they

can improve the monitoring and protection of human rights—for example, by tracking humanitarian situations or averting violence. Because of this, the relationship between human rights and big data is complicated and necessitates a fair, rights-based strategy. Big Data's capacity to assist crisis response and early warning systems is among its most important advantages. For example, humanitarian organizations have tracked population shifts, war areas, and natural disasters using satellite imagery and real-time social media analysis. Faster and more focused humanitarian operations are made possible by this knowledge, guaranteeing that aid reaches vulnerable communities more successfully. In a similar vein, Big Data aided in the effective deployment of medical resources, the tracking of infection rates, and the prediction of hotspots during public health catastrophes such as the COVID-19 pandemic .By improving readiness and reactivity, these applications show how data analytics, when used properly, may protect the rights to life, health, and safety. Big Data, however, also presents serious threats to individual security and privacy rights. People might not be aware of how their personal information is being used or retained due to the extensive scope and frequently opaque nature of data collecting. Article 17 of the International Covenant on Civil and Political Rights (ICCPR) and other fundamental principles of data protection and privacy are frequently violated by governments and private companies when they collect data without informed consent. Often justified in the name of national security, the use of biometric data collection, facial recognition software, and mass surveillance tools can result in invasive monitoring of citizens and the repression of dissent, undermining democratic freedoms like the right to free speech and assembly.

Furthermore, if Big Data platforms are not properly managed, they may contribute to biased practices and reinforce pre-existing biases. If algorithms are educated on biased data sets, they may reflect and magnify previous inequalities in social assistance distribution, employment screening, and policing. Predictive policing systems, for instance, have come under fire for unfairly singling out minority neighbourhoods, which exacerbates rather than resolves systemic injustices. Accountability is made more difficult by algorithmic decision-making procedures' lack of transparency, since those impacted by judgments that affect their rights sometimes lack the ability to contest or comprehend the reasoning behind them. Therefore, the rights to equality and non-discrimination may be threatened by the unrestrained use of big data.

The need for legislative frameworks that encourage accountability, transparency, and ethical data practices is developing in order to guarantee that Big Data upholds human rights rather than compromises them. By giving people control over their data and imposing legal requirements on data processors, data protection legislation, like the EU's General Data Protection Regulation (GDPR), provides an example. The significance of including human rights impact evaluations into the creation and application of data technology has also been underlined by international human rights organizations. To promote open standards, algorithmic justice, and increased public monitoring, civil society organizations, technologists, and human rights advocates must collaborate. In the end, Big Data used responsibly and in accordance with human rights principles can be a potent instrument for the benefit of society while preserving individual liberties.

THE EFFECT OF ARTIFICIAL INTELLIGENCE ON THE CREATION OF A SOUND LEGAL SYSTEM

The legal system is only one of several industries around the world that artificial intelligence (AI) is changing. Legal research and case analysis are among the areas where AI is having the biggest effects. To construct arguments, legal experts have historically invested a great deal of time in studying statutes, case law, and scholarly commentary. Through machine learning and natural language processing, AI-powered solutions like ROSS Intelligence, LexisNexis, and Westlaw Edge have completely transformed this procedure. In only a few seconds, these systems can evaluate thousands of pages of legal papers and produce precise and pertinent case precedents.AI contributes to more consistent legal interpretations by enhancing the speed, precision, and breadth of legal research—a crucial element of a strong legal system based on consistency and predictability. AI is also having a significant influence on improving judicial decision-making and lessening human prejudice. To help courts determine bail or sentencing recommendations and assess recidivism risks, artificial intelligence (AI) tools such as COMPAS and HART have been developed. These technologies show how AI may bring objectivity to usually subjective decision-making processes, notwithstanding their contentious nature. Judges should ideally be able to lessen implicit and cognitive biases by depending on data-driven insights, guaranteeing that decisions are impartial and supported by facts. This advantage, however, is contingent upon the calibre, openness, and equity of the algorithms employed.AI can be a potent ally in advancing impartiality, one of the cornerstones of a just judicial system, if it is developed responsibly. AI is essential for expanding access to justice in addition to helping judges and legal professionals. Many people find it difficult to get legal help because of exorbitant fees or a lack of legal infrastructure, particularly in low-income or rural areas. This gap has begun to be filled by AI chatbots and companies like DoNotPay, which provide reasonably priced, if not free, legal advice on issues like traffic tickets, landlord disputes, and asylum applications. With the use of these resources, people can effectively claim their rights by gaining access to previously unobtainable legal knowledge.AI systems have the potential to close long-standing disparities in legal accessibility and equity as they develop to accommodate different languages and regional legal subtleties. By simplifying legal procedures and lowering administrative workloads, AI also improves the efficacy and efficiency of legal organizations. As noted by Olayinka, (2025) AI-driven system tends to require overcoming challenges such as high-cost implementation, the need for training of employees, algorithm bias and ethical concerns that surround the privacy of data. AI-driven technologies are now used by courts in a number of jurisdictions to automate filing processes, manage dockets, and forecast case durations. AI systems that can recognize important clauses, discrepancies, or hazards have sped up formerly labour-intensive processes like document screening and contract analysis. In addition to speeding up court hearings, this automation lowers case backlogs, which are a frequent issue in overworked legal systems. One essential component of a good judicial system is the prompt administration of justice, and AI offers the means to make this goal more feasible.

Notwithstanding its advantages, the incorporation of AI into the legal system poses significant moral and legal issues that need to be resolved in order to protect accountability and due process. Many AI systems function as "black boxes," which means that users, such as judges and attorneys, cannot readily understand or see how they make decisions.

Fundamental legal rights like the right to a fair trial and the capacity to appeal unfair verdicts are at risk due to this lack of explain ability. Equality before the law is also called into question by the possibility of algorithmic bias, in which AI systems inadvertently reproduce and magnify societal prejudices. Transparency, accountability, and human oversight are essential components of a really good legal system, particularly when integrating AI. To guarantee that AI is applied morally and in a way that upholds the rule of law rather than challenges it, legal frameworks must change.

THE EFFECT OF BIG DATA ON THE CREATION OF A SOUND LEGAL SYSTEM

Due to the numerous possibilities it presents for enhancing legal research, decision-making, and policy formation, big data has emerged as a key component in the development of contemporary legal systems. Unprecedented amounts of organised and unstructured data, such as court rulings, statutes, contracts, and public opinions, are now available to legal experts and organisations. This data can be examined using advanced analytics to find trends, patterns, and discrepancies in legal procedures. Predictive analytics, for instance, can help lawyers and judges predict case outcomes based on past data, resulting in more consistent and informed decisions. This use of big data enhances the objectivity and transparency of legal processes, which are essential features of a sound legal system (McCarthy, 2020).

Big data also aids in the creation of evidence-based laws and policy changes. In order to create laws that are both pertinent and responsive to actual societal demands, lawmakers might examine social behaviour, economic statistics, crime trends, and public emotion. Big data-driven crime mapping, for example, enables policymakers to comprehend the demographic and geographic distribution of criminal activity, which can impact legislation pertaining to public safety, urban development, and judicial reform. By grounding legal reforms in empirical evidence, big data reduces the reliance on assumptions and promotes fairness and efficiency in law making (Schönberger & Cukier, 2013).

Big data also makes it possible for online dispute resolution platforms and digital legal services, which improve access to justice. These data analytics-driven businesses assist people in understanding their legal rights, creating papers, and even getting personalised legal advice via chatbots or applications. Big data is being used more and more by legal tech companies to recommend alternate dispute resolution procedures or connect clients with qualified attorneys. This makes the legal system more accessible, especially to those who cannot afford more conventional legal services. In this way, big data helps bridge the justice gap and promotes legal empowerment for underserved populations (Remus & Levy, 2017). Big data integration into judicial systems is not without its difficulties, though. Data privacy and the moral use of personal data are two main issues. Legal frameworks must guarantee that data used for analytics adheres to data protection regulations like the General Data Protection Regulation (GDPR) and respects people's right to privacy. Additionally, the use of biased or incomplete datasets may lead to discriminatory outcomes, particularly in criminal justice algorithms and predictive policing. Without proper oversight and regulation, the misuse of big data can undermine fairness and equality before the law, which are fundamental principles of a sound legal system (Barocas & Selbst, 2016).

THE JOINT EFFECT OF ARTIFICIAL INTELLIGENCE ON HUMAN RIGHTS PROTECTION FOR A SAFE NIGERIA AND CREATION OF A SOUND LEGAL SYSTEM FOR A SAFE NIGERIA

The future of human rights, security, and government in Nigeria could be drastically altered by the combination of artificial intelligence (AI) and big data. Nigeria, the most populous nation in Africa and a key hub for the digital economy, has numerous difficult issues, including human trafficking, terrorism, corruption, police brutality, and electoral fraud. Combining AI and big data provides cutting-edge technologies for real-time proactive decision-making, pattern recognition, and analysis of enormous volumes of data. These technologies have the potential to improve public service delivery, increase transparency, and safeguard citizens' rights when used properly. However, their misuse could also exacerbate already-existing rights breaches in a country that struggles with institutional deficiencies, surveillance abuse, and inadequate data governance. Therefore, in order to advance a safer and more equitable Nigeria, the application of AI and Big Data must be guided by human rights values. The fields of national security and crime prevention in Nigeria are among the most potential uses of AI and big data.AI-enabled surveillance systems and data analytics can help early warning systems and intelligent reaction mechanisms in light of the Northeast insurgencies, the rise in kidnapping instances, and interregional communal violence. For instance, law enforcement can anticipate and thwart such attacks by examining geolocation data, social media activity, and cell phone metadata. Drones with AI capabilities and facial recognition software can help find people who have gone missing or keep an eye on unsafe areas. Such instruments could protect the right to life and security when they are in line with due process. But without adequate control, they may also result in arbitrary surveillance, ethnic group profiling, and privacy rights violations—problems Nigeria has previously faced during military crackdowns and #EndSARS protests.

Big Data and AI also have enormous potential to enhance access to justice, transparency, and governance. Corruption and inefficiency frequently impede Nigeria's legal and judicial processes. To maintain uniformity and cut down on backlogs, artificial intelligence (AI) systems can assist in automating court procedures, monitoring case schedules, and analysing court rulings. Improved oversight of public spending and social programmes is another benefit of data-driven governance, which aids in the fight against corruption and guarantees fair service delivery. Citizens' rights to justice and information are reinforced when they have access to open government data and online legal resources. However, unless deliberate inclusion tactics are implemented, many Nigerians may not be able to profit from new technologies in a culture with low digital literacy and poor internet connection in rural regions.

Notwithstanding their advantages, Nigerian civil liberties are seriously at risk from the combined use of AI and big data. Citizens have been exposed to data misuse due to the lack of a thorough data protection framework until recently. Even though Nigeria passed the Nigeria Data Protection Act in 2023, many public and private organisations continue to gather personal information without explicit authorisation, and enforcement of the law is still lax. Algorithmic decision-making has the potential to perpetuate inequality and marginalise specific groups, especially women, members of ethnic minorities, and people with disabilities, if it is founded on insufficient or biased data. Additionally, freedom of expression may be

violated by the use of facial recognition and predictive policing, particularly in a nation where protests are frequently met with disproportionate force. Therefore, in order to prevent abuse, technology developments must be accompanied by strong institutional capability, ethical standards, and legal frameworks.

Nigeria must embrace a rights-based, inclusive, and transparent strategy to guarantee that AI and Big Data become facilitators of safety and human rights rather than instruments of tyranny. This entails creating AI ethics standards based on global human rights legislation, upholding data security regulations, and bolstering civil society supervision. Before using AI systems, public institutions must be required to carry out human rights impact evaluations. To close the digital divide and provide people the power to comprehend and manage how their data is used, investments in digital infrastructure, education, and public awareness are also required. Nigeria can also develop locally relevant, culturally appropriate, and rights-respecting technology with the aid of international alliances and cooperation with African tech ecosystems. When used effectively, the combination of AI and big data may greatly improve the protection of human rights, fortify democratic governance, and make Nigeria a safer place for everyone.

Nigeria's judicial system has a significant chance to become more efficient, open, and user-friendly, thanks to artificial intelligence (AI).AI can assist in resolving long-standing inefficiencies in Nigeria's justice system, including protracted trial periods, case backlogs, and inconsistent verdicts, thanks to its capacity to process enormous volumes of data and automate intricate operations. Judges and solicitors can benefit from AI-driven legal analytics tools that analyse previous decisions, find precedents, and even forecast results based on historical data. This promotes consistency in legal interpretation and reduces human error or bias, contributing to a more predictable and just legal system that upholds the rule of law—an essential foundation for national safety and development (McCarthy, 2020).

AI has the potential to significantly enhance public safety and legal access for Nigeria's varied populace. Due to expensive fees and a lack of knowledge, many Nigerians, especially those living in rural regions, find it difficult to obtain legal assistance.AI-powered tools, such as mobile legal apps and legal chatbots, can aid in creating documents, inform the public about their rights, and offer rudimentary legal advice. Without having to go through costly and drawn-out legal procedures, these digital technologies enable people to settle small disputes or seek restitution for rights breaches. As citizens become more legally aware and confident, they are better equipped to prevent exploitation and contribute to a more lawful and peaceful society (Remus & Levy, 2017).

Artificial intelligence (AI) tools like facial recognition, predictive policing, and surveillance analytics are already impacting law enforcement tactics in the fields of security and crime prevention. AI might help security authorities discover crime patterns, monitor suspects, and allocate resources more effectively in a nation like Nigeria, where insecurity from terrorism, abduction, and armed robbery continues to be a major problem. When used properly, predictive crime mapping can direct patrols to high-risk locations, speed up response times, and eventually discourage criminal activity. However, these tools must be carefully regulated to avoid infringing on citizens' privacy rights or reinforcing systemic biases, especially in ethnically and religiously sensitive regions (Barocas & Selbst, 2016).

Notwithstanding these advantages, there are serious hazards associated with incorporating AI into Nigeria's legal and security framework that need to be considered. In the absence of established ethical standards and legal frameworks, the application of AI may result in constitutional rights violations, erroneous arrests, and misuse of surveillance technology. Furthermore, using AI tools created outside of Nigeria without considering local context might lead to misuse or digital colonialism, which undermines Nigerian laws and values. Therefore, it is imperative that Nigeria create its own AI regulations that put human rights, data security, and equity first. Building local capacity in AI research and development will ensure that technologies are tailored to Nigeria's legal realities and societal needs (UNESCO, 2021).

CONCLUSION

In conclusion, AI-aided big data technology represents a transformative advancement in predicting potential case outcomes, offering unprecedented analytical power, speed, and precision across sectors such as law, healthcare, finance, and risk management. By combining sophisticated machine learning algorithms with vast, diverse datasets, these systems can uncover complex patterns, anticipate trends, and support evidence-based decision-making with a level of accuracy unattainable by traditional methods. However, to fully realize its potential, it is imperative to address challenges related to data privacy, algorithmic bias, and model transparency, ensuring that predictions are not only accurate but also fair and interpretable. With continued innovation in explainable AI, ethical governance, and scalable infrastructure, AI-aided big data will remain an indispensable tool in shaping future predictive analytics and driving impactful, informed outcomes.

RECOMMENDATIONS

- It is advisable to adopt AI in developing comprehensive regulations that define ethical use, data privacy standards, and accountability mechanisms for AI-driven legal and human rights applications.
- It is good to ensure that predictive models used in judicial or law enforcement contexts are interpretable, so stakeholders can understand and verify decision-making processes.
- There is need to integrate court records, law enforcement data, and human rights reports into a secure, unified platform to enable real-time access and analysis for faster case resolution.

REFERENCES

Access Now. (2020). *Surveillance in Nigeria: Policy and Practice*.

Adebayo, A., & Akinwale, A. (2021). Digital Governance and Human Rights in Nigeria: Opportunities and Risks. *African Journal of Governance and Development*, 10(2), 45–62.

Akpan E., E., & Clark J., L., (2024). Artificial Intelligence: An Emerging Technology for Service and production Enhancement In The 21st Century. Vol. 3. No.1. (63-64).

Algorithm Watch. (2020). Automating Society Report. Retrieved from https: //algorithmwatch.org

Article 19. (2021). Artificial Intelligence and Freedom of Expression. Retrieved from https://www.article19.org

Ashley, K. D. (2020). Artificial intelligence and legal analytics: New tools for law practice in the digital age. Cambridge University Press. https://doi.org/10.1017/9781108635979

Badman & Kosinski (2024). What is big data? Available at: https://www.ibm.com/think /topics/big-data

Balakud R. (2024). Classification of Human Rights. Available at: https://thelegalqna.com /classification-of-human-rights/? utm_source

Bărcanescu, E. D. (2021). Big data, artificial intelligence, and the risk of bias in predictive models. *Journal of Risk and Financial Management*, 14(2), 55. https://doi.org/10.3390/jrfm14020055

Barocas, S., &Selbst, A. D. (2016). Big Data's Disparate Impact. California Law Review, 104(3), 671–732. https://doi.org/10.2139/ssrn.2477899

Barocas, S., & Selbst, A. D. (2016). Big Data's Disparate Impact. California Law Review, 104(3), 671–732. https://doi.org/10.2139/ssrn.2477899

Bassey M., M., & Owushi E., (2023), Adoption of Artificial Intelligence in Library and Information Science in the 21st Century: Assessing the Perceived Impacts and Challenges by Librarians in Akwa Ibom and Rivers States. *International Journal of Current Innovations in Education.* Vol. 6 No.1. (75-77).

Bench-Capon, T., & Atkinson, K. (2020). Argument schemes for reasoning with legal cases. Artificial Intelligence and Law, 28(2), 131–165. https://doi.org/10.1007/s10506-020-09267-7

Casey, A. J., & Niblett, A. (2017). The Death of Rules and Standards. *Indiana Law Journal,* 92(4), 1401–1433.

Chen (2024), What Is Big Data? Available at: https://www.oracle.com/africa/big-data/what-is-big-data/

Crawford, K., & Paglen, T. (2021). Excavating AI: The Politics of Images in Machine Learning Training Sets. *International Journal of Communication*, 15, 3702–3722.

Eaglin, J. M. (2017). Constructing Recidivism Risk. Emory Law Journal, 67(1), 59–123.

Eubanks, V. (2018). Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor. St. Martin's Press.

Ezeani, E. J. (2022). The Ethics of AI and the Future of Justice in Nigeria. *Journal of African Law*, 66(1), 55–78.

Gokhale, S., Mathur, V., & Mago, V. (2020). Using big data analytics for fraud detection in insurance industry. Journal of Big Data, 7(1), 1–23. https://doi.org/10.1186/s40537-020-00345-3

Guidotti, R., Monreale, A., Ruggieri, S., Turini, F., Giannotti, F., & Pedreschi, D. (2021). A survey of methods for explaining black box models. ACM Computing Surveys, 51(5), 1–42. https://doi.org/10.1145/3236009

Hindu, (2024). Concept of Human Rights. Available at: https://www.drishtijudiciary.com /editorial/concept-of-human-rights

Hulatt & Freitas (2025), Legal System. Available at: https://www.studysmarter.co.uk /explanations/law/uk-legal-system/legal-system/

ICRC. (2020). Autonomous Weapons: A Legal and Ethical Perspective. Retrieved from https://www.icrc.org

ILO. (2021). World Employment and Social Outlook – Trends. Retrieved from https://www.ilo.org

Katz, D. M., Bommarito, M. J., & Blackman, J. (2017). A General Approach for Predicting the Behavior of the Supreme Court of the United States. PLoS ONE, 12(4), e0174698.

Kelly, (2018). What Is the Legal System? Understanding the Backbone of Justice. Available at: https://www.akdlawyers.com/general/legal-system-overview/

Kingsley P., K., & James C., (2025). The Barriers to Effective Information Dissemination by Mass Media: Assessing the Mitigating Strategies Using Modern Technologies In The 21st Century. Gaspro International Journal of Language and Linguistics. Vol. 5 No 1, (53-58).

Mantelero, A. (2017). AI and Big Data: A Blueprint for a Human Rights, Social and Ethical Impact Assessment. Computer Law & Security Review, 33(5), 687–703.

McCarthy, S. (2020). Legal Analytics and the Rule of Law: Using Data to Improve Decision-Making. *Oxford Journal of Legal Studies*, 40(2), 301–326.

McCarthy, S. (2020). Legal Analytics and the Rule of Law: Using Data to Improve Decision-Making. *Oxford Journal of Legal Studies, 40*(2), 301–326.

National Information Technology Development Agency (NITDA). (2023). Nigeria Data Protection Act.

Olamide (2019). LEGAL SYSTEM: MEANING AND TYPES. Available at: https://djetlawyer.com/meaning-types-legal-systems/

Remus, D., & Levy, F. (2017). Can Robots Be Lawyers? Computers, Lawyers, and the Practice of Law. *Georgetown Journal of Legal Ethics*, 30(3), 501–558.

Rudin, C. (2019). Stop explaining black box machine learning models for high stakes decisions and use interpretable models instead. Nature Machine Intelligence, 1(5), 206–215. https://doi.org/10.1038/s42256-019-0048-x

Schönberger, V., &Cukier, K. (2013). Big Data: A Revolution That Will Transform How We Live, Work, and Think. Eamon Dolan/Houghton Mifflin Harcourt.

Segal (2025). How Companies Use Big Data. Available at: https://www.investopedia.com /terms/b/big-data.asp

Shah, N. H., Milstein, A., & Bagley, S. C. (2021). Making machine learning models clinically useful. JAMA, 325(14), 1351–1352. https://doi.org/10.1001/jama.2021.1913

Surden, H. (2019). Artificial Intelligence and Law: An Overview. Georgia State University *Law Review*, 35(4), 1305–1337.

Susskind, R. (2019). *Online Courts and the Future of Justice*. Oxford University Press.

Susskind, R. (2019). Online Courts and the Future of Justice. Oxford University Press.

Tufekci, Z. (2015). Algorithmic Harms Beyond Facebook and Google: Emergent Challenges of Computational Agency. *Colorado Technology Law Journal*, 13(203), 203–218.

Udo-OkonT., N., &Ekong, X., M.,(2022).Assessment of the Innovative Technologies and Its Implications on Library Services in Tertiary Institutions in Akwa Ibom State. *Universal Journal of Library and Information Sciencevol*.3 No.1. (98-102).

UNESCO. (2021). Recommendation on the Ethics of Artificial Intelligence. Retrieved from https://unesdoc.unesco.org

United Nations Human Rights Office. (2018). the Right to Privacy in the Digital Age. [A/HRC/39/29].

United Nations Office of the High Commissioner for Human Rights (UN OHCHR). (2018). the Right to Privacy in the Digital Age (A/HRC/39/29).

Upcounsel. (2020). Legal definition of precedent: What you need to know. https://www.upcounsel.com/legal-def-precedent

Verma, S., & Varma, A. (2021). Bias in machine learning models: A review. Procedia Computer Science, 181, 381–390. https://doi.org/10.1016/j.procs.2021.01.197

Weston, (2025). Human rights. Available at: https://www.britannica.com/topic/human rights

World Economic Forum. (2021). Artificial Intelligence and the Future of African Governance.

Zhou, Z., Siddiqui, M., & Zhao, Z. (2021). Federated learning for big data: A systematic literature review. Future Generation Computer Systems, 118, 427–450. https://doi.org/10.1016/j.future.2021.01.011

Zuboff, S. (2019). *The Age of Surveillance Capitalism*. Public Affairs.

Zuboff, S. (2019). *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power.* Public Affairs.

Habeeb, H., Adesemowo, A. O. & Babatunde, A. T., (2025). The Application of Artificial Intelligence in Human Resource Management: Emerging Challenges and Strategic Pathways. KING-UK International Journal of Academic Anthology, 9(1), 15-25.

Olayinka, (2025). Leveraging Ai-Driven Auto store Systems to Enhance Emergency Response and Crisis Management; A Focus on Grocery Stores. *Academic journal of global who is who in academia,* 6(1), 1-4